Skyscanner

National Weather Service
Aberdeen, South Dakota

October 2008

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Winter Weather Preparedness Weeks

South Dakota Winter Weather Preparedness Week
October 27th-31st

Minnesota Winter Weather Preparedness Week
November 10th-14th

The seasons are changing, and the first snowfall will be here before we know it. To get ready for the transition to more winter-like weather, Winter Weather Preparedness weeks are quickly approaching. In South Dakota, October 27-31 will be dedicated to preparedness activities. In Minnesota, Winter Weather Preparedness Week will be November 10 -14. Preparedness week is a time to make sure you are ready for the change in weather by winterizing your car, preparing your emergency kits for your home and vehicles, and becoming re-acquainted with winter weather terminology. As the weeks approach, you will be able to find more information on our website, http://weather.gov/aberdeen . You can also find preparedness information at http://breadysd.com .

Snowfall Reminders

With winter just around the corner, it's time once again to review the procedures for measuring and reporting winter precipitation.

Helpful reminders:

At the beginning of the snowfall/freezing season, remove the funnel and inner measuring tube of the rain gauge to expose the overflow can so that is can more accurately catch frozen precipitation.

Check your gauge to make sure there are no leaks. If there are leaks, give us a call and we'll mail you out a new one.

If you have a snow board, put it out and mark its location with a flag or some other indicator so it can be found after a new snowfall. Be sure to locate it in an open area (not under trees, obstructions, or on the north side of structures in the shadows).

What to report:

Measure and record the snowfall (snow, sleet, snow pellets) since the previous snowfall observation. Take this measurement once-a-day and be sure to reflect the total accumulation of new snow observed (in inches and tenths, for example, 3.9 inches) since the last snowfall observation.

Determine the depth of snow on the ground at the normal observation time. Take this observation once-a-day at the scheduled time of observation. Use a measuring stick to measure the total depth of snow on the ground. Report snow depth to the nearest whole inch, rounding up when one-half inch increments are reaches (example 0.4 inches gets reports as a trace (T), 3.5 inches gets reported as 4 inches).

Measure and record the water equivalent of snowfall since the previous days observation.

Measuring liquid precipitation equivalent:

Report the liquid water equivalent for any NEW snowfall to the nearest 0.01 inch.

Two methods for melting snow

Add warm water to the gauge in order to melt the snow. Remember to carefully measure the added warm water so you can subtract that figure from your final measurement.

Another method is to place the rain gauge in a bucket of warm water. Remember to dry the outside of the gauge off so none of the water from the bucket runs down the sides and into your measuring tube.

If too little snow has fallen to effectively measure, report it as a trace.

Reporting New Snowfall Depth:

Take an average of ten measurements in an open area. Try to avoid any drifts or bare spots.

Report to the nearest 0.1 of an inch.

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Reporting Total Snow Depth:

Report snow depth whenever snow covers more than 50% of the ground.

Report to the nearest whole inch. If less than ½ inch, report as a trace.

Note: Measuring total snow depth can be tricky. As you know, snow may melt quickly from south facing areas, but linger for days in shaded or north facing area. Use good judgment in averaging the snow depth around your area.

We at the National Weather Service would like to take this opportunity to say THANKS! With the assistance of our COOP and precipitation spotters, we hope to have a successful winter season keeping the public informed and ready.

Highway 12 Windstorm

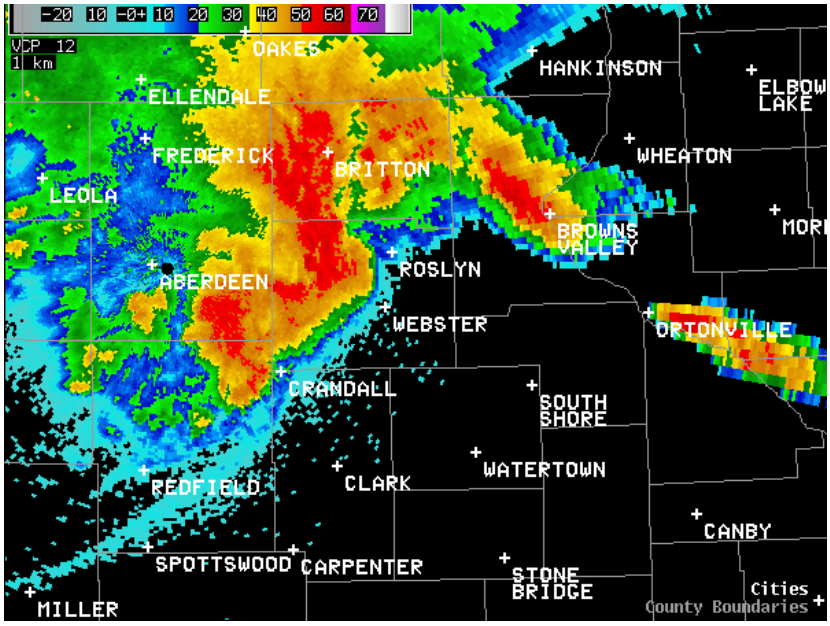
As the people of South Dakota and Minnesota know all too well, the weather can turn dangerous during the warm and humid summer months and on July 31st, 2008, that is exactly what happened. In the early morning hours of July 31st, a fast moving line of thunderstorms brought widespread wind damage to a large part of northeast South Dakota and west central Minnesota. The storms originated in North Dakota and began to expand and surge southeast into northeast South Dakota. As the storms moved southeast, they began to tap into warmer, more humid air and rapidly evolve into a line of severe thunderstorms. Widespread wind damage occurred in a swath extending from Long Lake in McPherson County all the way into eastern Grant County and southern Big Stone County in Minnesota. In fact, this line of storms continued to produce damage throughout the morning as it raced across southern Minnesota and into northern Illinois. The most extensive damage in northeast South Dakota was generally found along and near US Highway 12 from Aberdeen to Milbank. Several observing stations in the path of the storm measured wind speeds ranging from 70 to over 115 mph. National Weather Service damage surveys estimated wind speeds even stronger with peak winds speeds over 120 mph.

"a fast moving line of thunderstorms brought widespread damage"

Over fifty communities in northeast South Dakota and west central Minnesota, along with the surrounding rural areas, received minor to major tree and structural damage as straight line winds from 70 to 120 mph raced across the area. The Webster and Waubay areas received the most extensive damage from the storms. Across the entire area, thousands of trees were snapped or uprooted, hundreds of grain bins were damaged or destroyed, hundreds of homes, businesses, and outbuildings were damaged or destroyed along with many power poles and miles of power lines downed. Many mobile homes, campers, and boats were also damaged or destroyed along with many road and business signs. Fallen trees also caused damage to many homes, vehicles, and campers . A State Forestry Specialist said the extensive tree damage in the Webster area was one of the worst he has ever seen.

The strong winds and hail also played havoc with the crops in northeast South Dakota and west central Minnesota. Thousands of acres of crops were also damaged or completely destroyed by the winds and hail. The greatest crop damage occurred in the Roslyn, Grenville, Eden, and Pickeral Lake areas in Marshall and Day counties. Many acres of corn were blown down and not able to come back. The large hail combined with the strong winds also broke out countless windows in homes and vehicles along with damaging the siding on homes. The downed power lines and poles also left thousands of people without power for up to several days. The intense winds were able to move large hay bales up to 700 yards. On Highway 12 near Webster and near Milbank, three semis were overturned by the high winds causing injuries to all of the drivers. Along with these injuries, several other storm related injuries occurred with no storm related deaths. Sadly, two days after the storm, a fifty-eight year old man died two miles north of Waubay during the cleanup when he was pinned between a backhoe and a tree. The Highway 12 windstorm will be remembered for years to come for many of the people of northeast South Dakota and west central Minnesota as one, if not, the most intense severe weather events they have experienced.

Radar image from July 31st just as the storm moves into the Webster area



Damage pictures from the July 31st windstorm

Onida Cooperative Observer Honored

Recognizing over 38 years of service to America, NOAA's National Weather Service has named Onida, S.D., resident Robert Pierce the 2008 recipient of the agency's John Campanius Holm Award for outstanding service in the Cooperative Weather Observer Program. The award is the agency's second most prestigious and only 25 were presented this year to deserving cooperative weather observers from around the country.

James Scarlett, meteorologist in charge of the Aberdeen, S.D., weather forecast office, presented the award to Bob at an award ceremony held at the Fireside Café in Onida. Program manager Tim Kearns of the Aberdeen office nominated Bob for the award.

The NWS Cooperative Weather Observer Program has given scientists and researchers continuous observational data since the program's inception more than a century ago. Today, more than 11,700 volunteer observers participate in the nationwide program to provide daily reports on temperature, precipitation and other weather factors such as snow depth, river levels and soil temperature.

Bob became the observer at the Onida site on October. 1, 1970, reporting daily temperature and precipitation data for the Weather Service. Meticulous records compiled by the long time rancher and farmer created a foundation for the development of 30-year temperature and precipitation norms for Onida. In addition, he provided data in 2003 and 2004 that justified opening Conservation Reserve Program lands for grazing during severe drought conditions.

The first extensive network of cooperative stations was set up in the 1890s as a result of an 1890 act of Congress that established the U.S. Weather Bureau. Many of the stations have even longer histories. John Campanius Holm's weather records, taken without benefit of instruments in 1644 and 1645, were the earliest known recorded observations in the United States.

Many historic figures have also maintained weather records, including Benjamin Franklin, George Washington and Thomas Jefferson. Jefferson maintained an almost unbroken record of weather observations between 1776 and 1816, and Washington took weather observations just a few days before he died. The Jefferson and Holm awards are named for these weather observation pioneers.

Aberdeen National Weather Service Meteorologist in Charge, James Scarlett, presents the John Campanius Holm award to Robert Pierce.

New Skywarn E-Newsletter

If you haven't already signed up for our new Skywarn Spotter e-newsletter, you can do so by going to https://ocwws.weather.gov/lists/list.php?id=70 . (You can also unsubscribe from the list at that same link if you decide it isn't for you.) These short but more frequent updates (usually monthly or less) cover a wide variety of topics with a focus on weather and weather preparedness. We currently have about 350 subscribers, but there is room to grow! If you have any questions on the e-newsletter, please contact Warning Coordination Meteorologist Jennifer Zeltwanger at jennifer.zeltwanger@noaa.gov or 605-225-0519.

Don't forget to change your clocks back one hour at 2:00 am on November 2nd.

1-605-225-0519

When significant or unusual weather events occur, give us a call! We're always happy to hear from the public, especially if you're calling to report snow amounts, hail, strong winds, or tornadoes. Don't wait until the next day...call us when it's happening.

NATIONAL
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OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

www.weather.gov/aberdeen

NWS Windchill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph) *Effective 11/01/01*

October's poplars are flaming torches lighting the way to winter.

~ Nova Bair